

Prior Art  
Figure 1

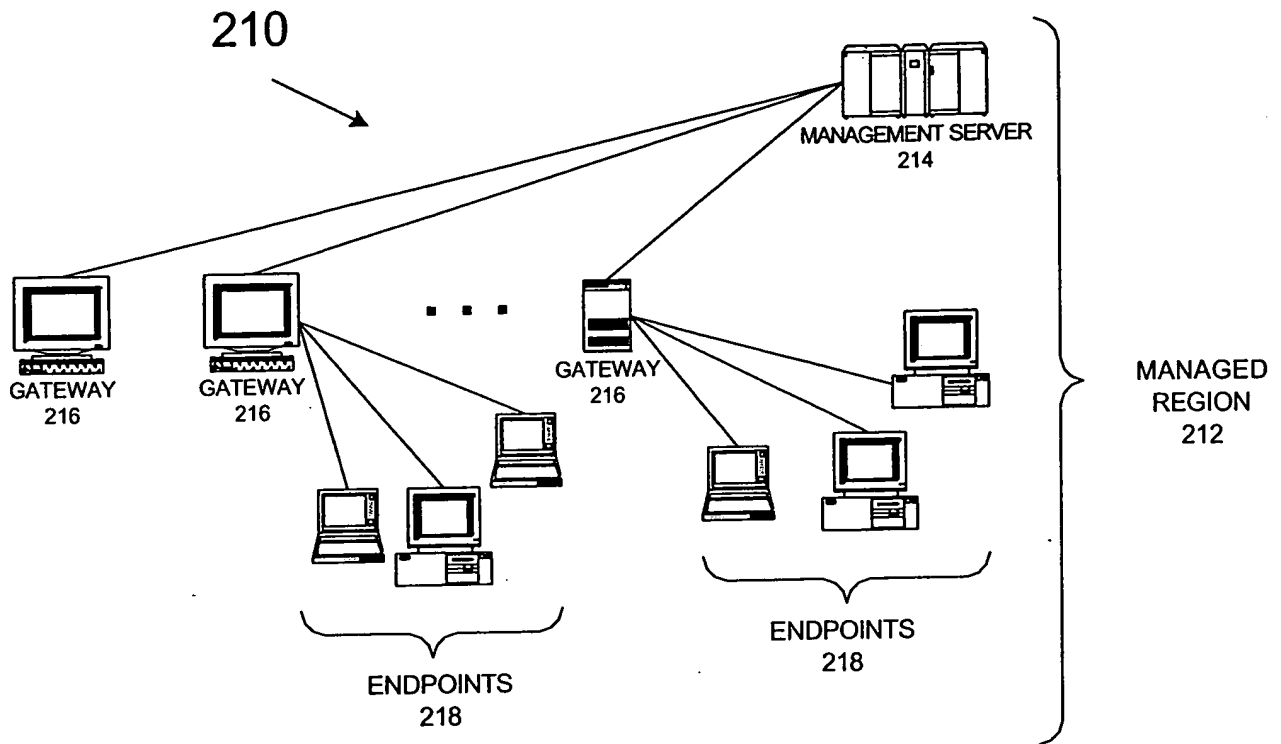


Figure 2A

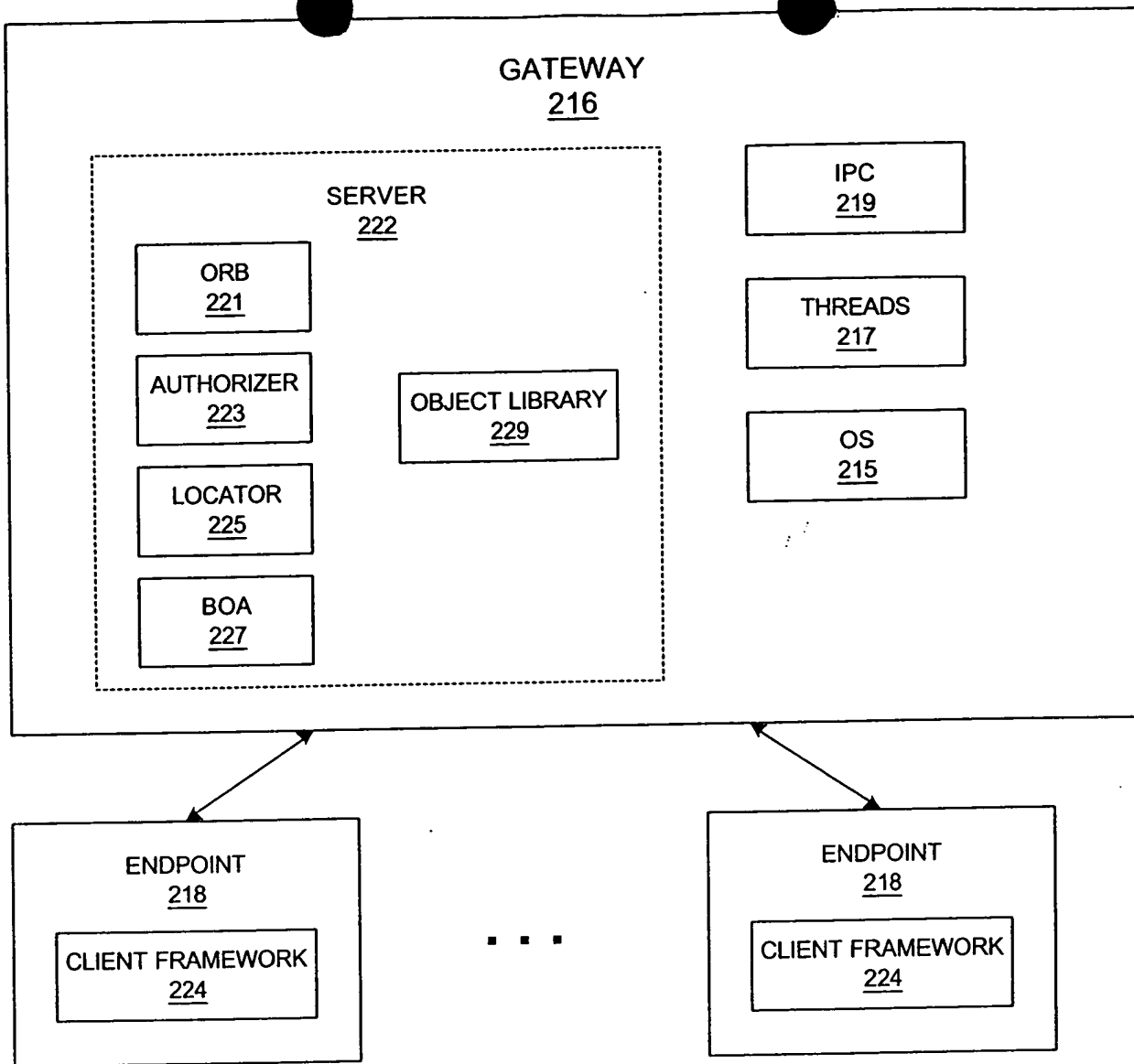


Figure 2B

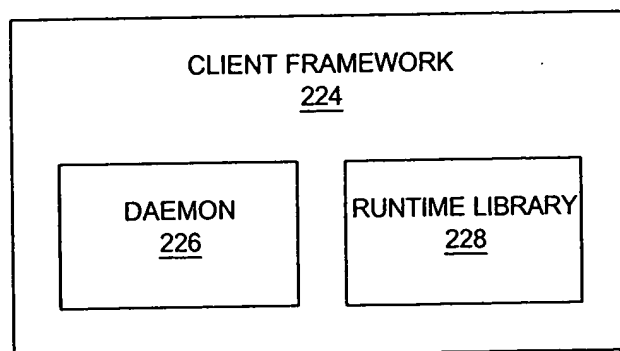


Figure 2C

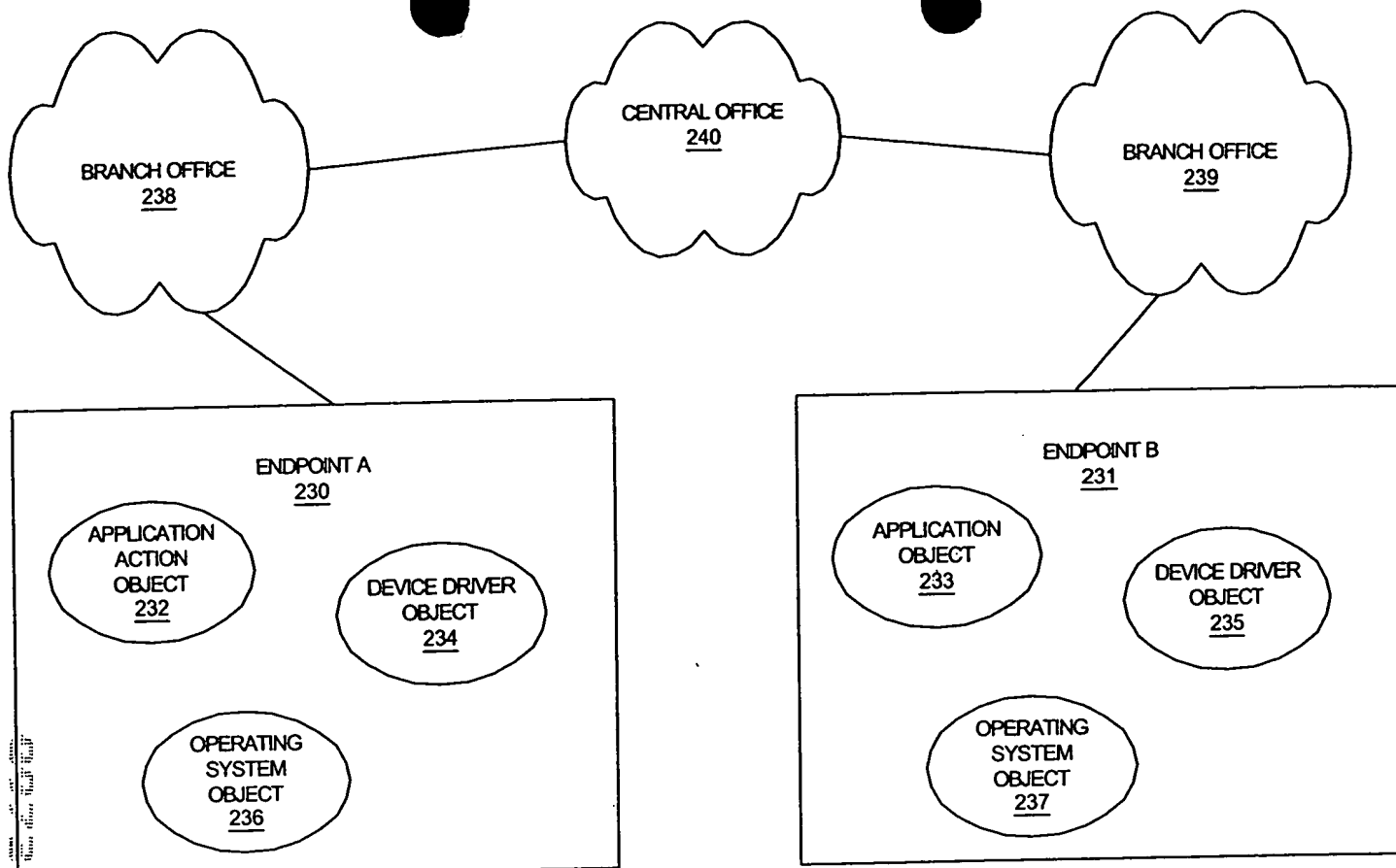


Figure 2D

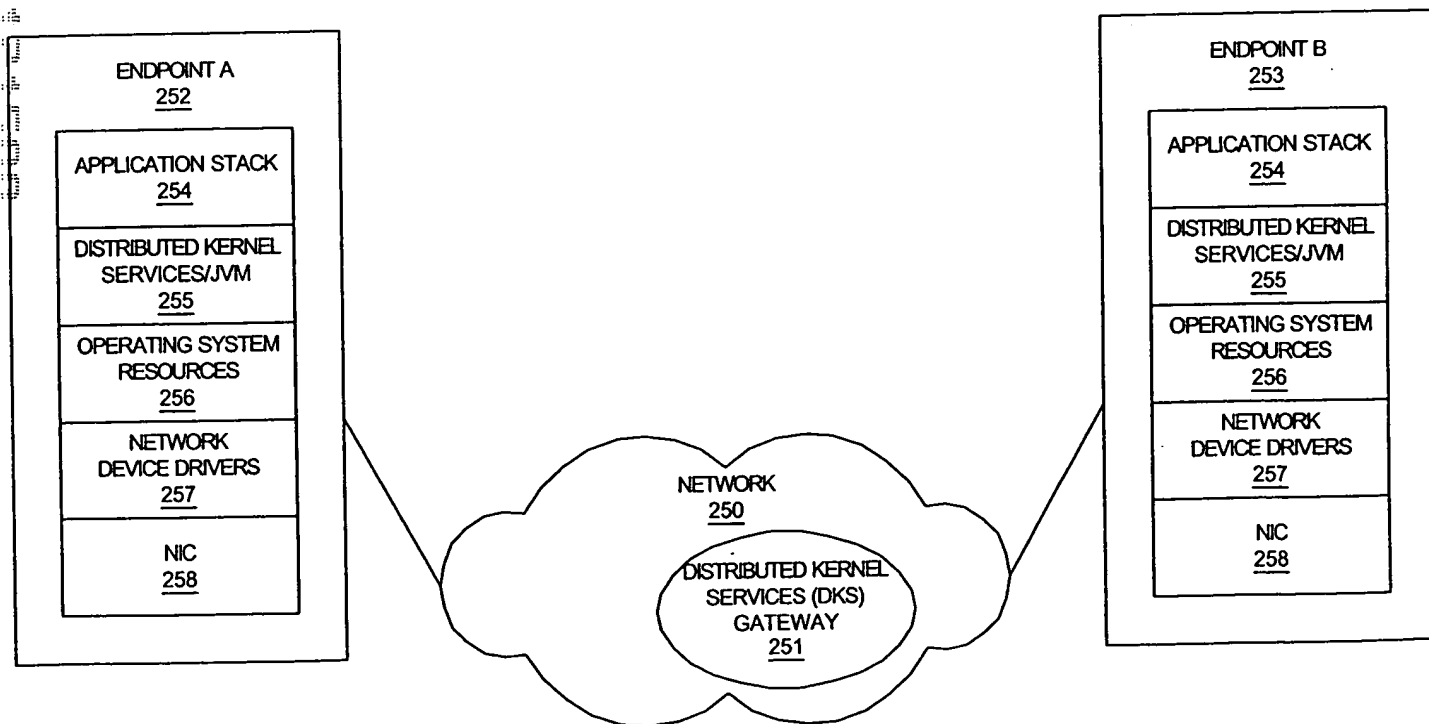


Figure 2E

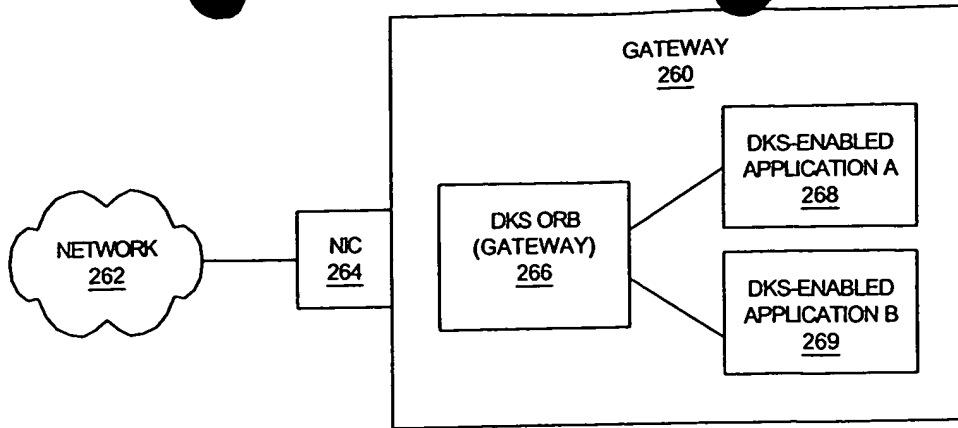


Figure 2F

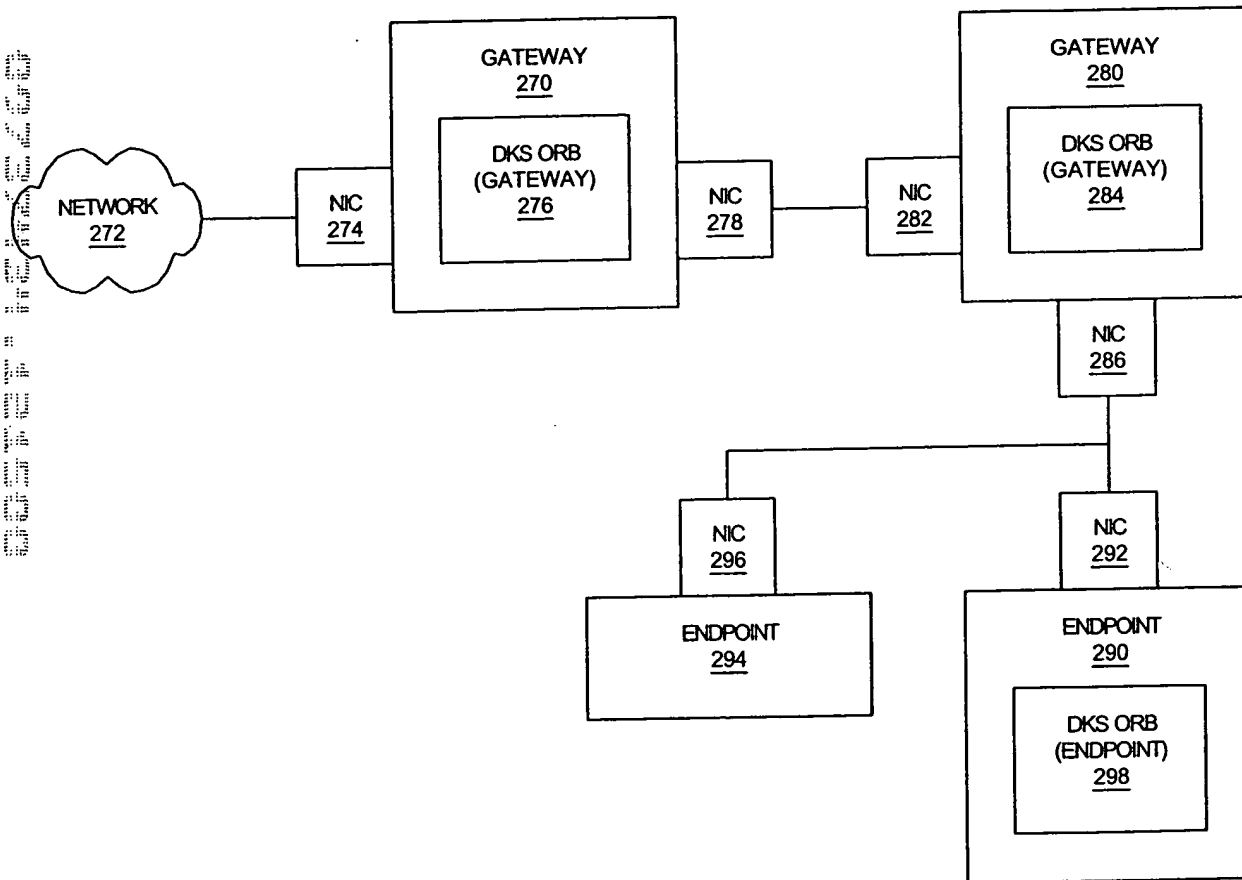


Figure 2G

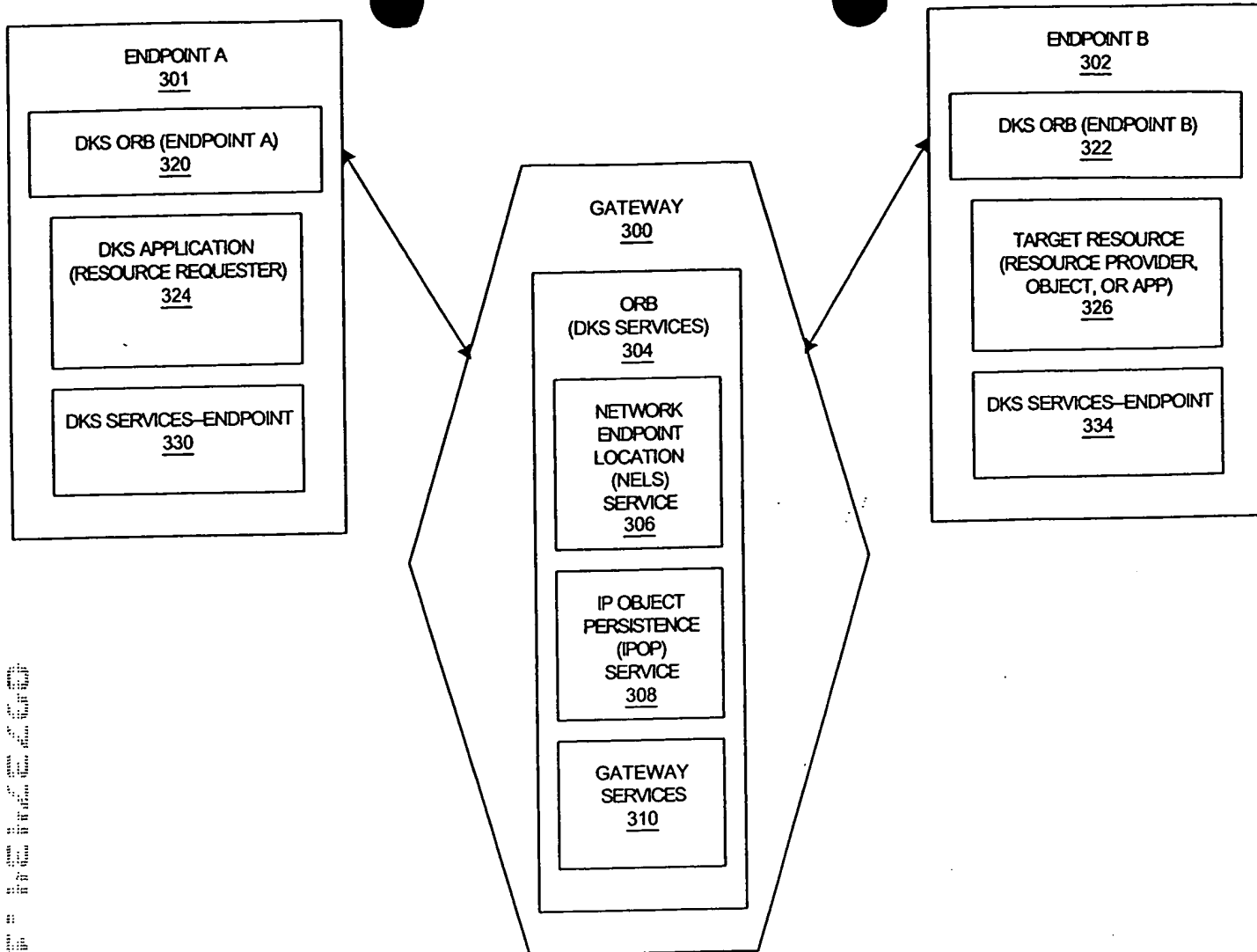


Figure 3

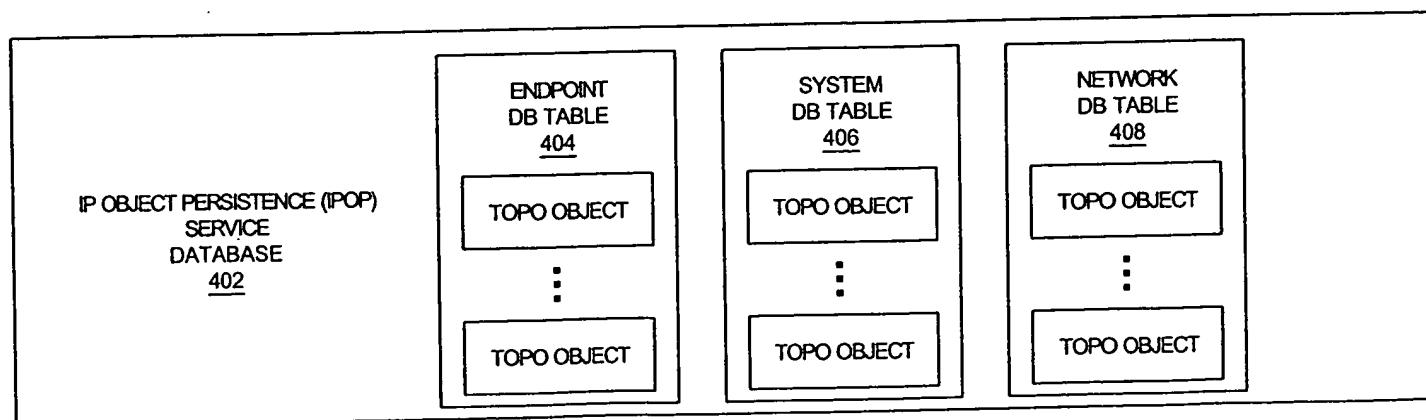


Figure 4



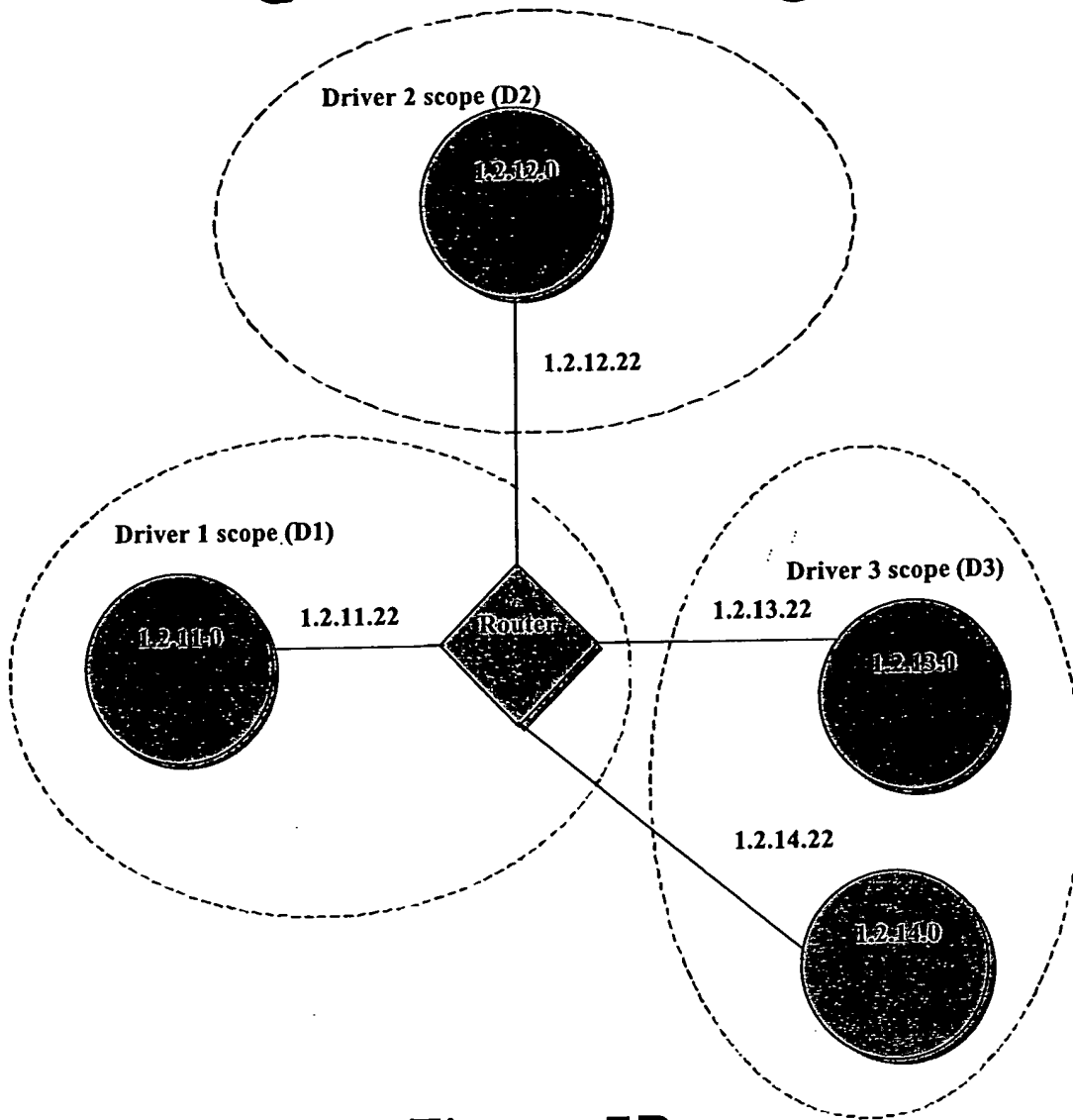


Figure 5B

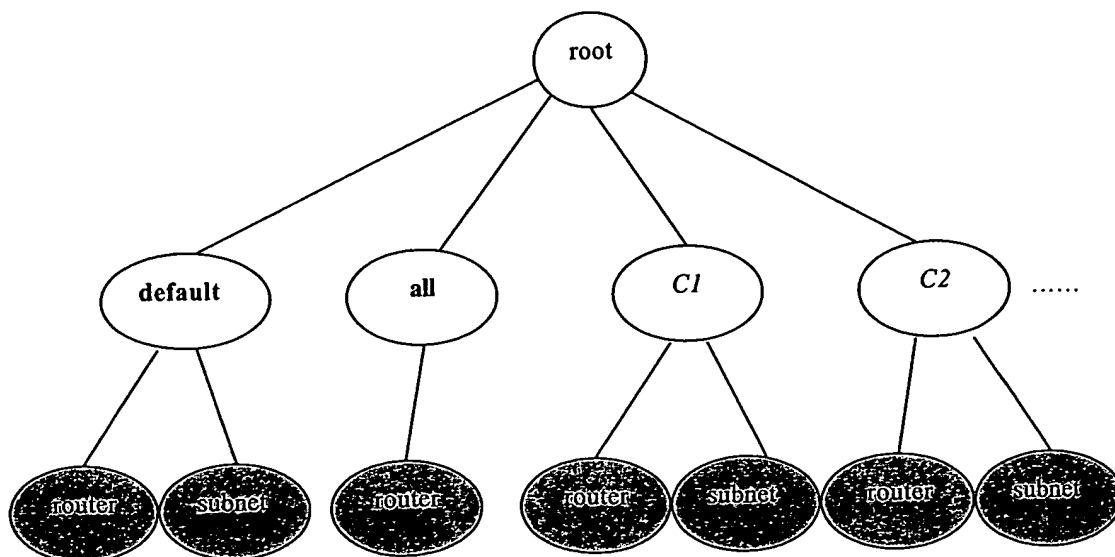


Figure 5C



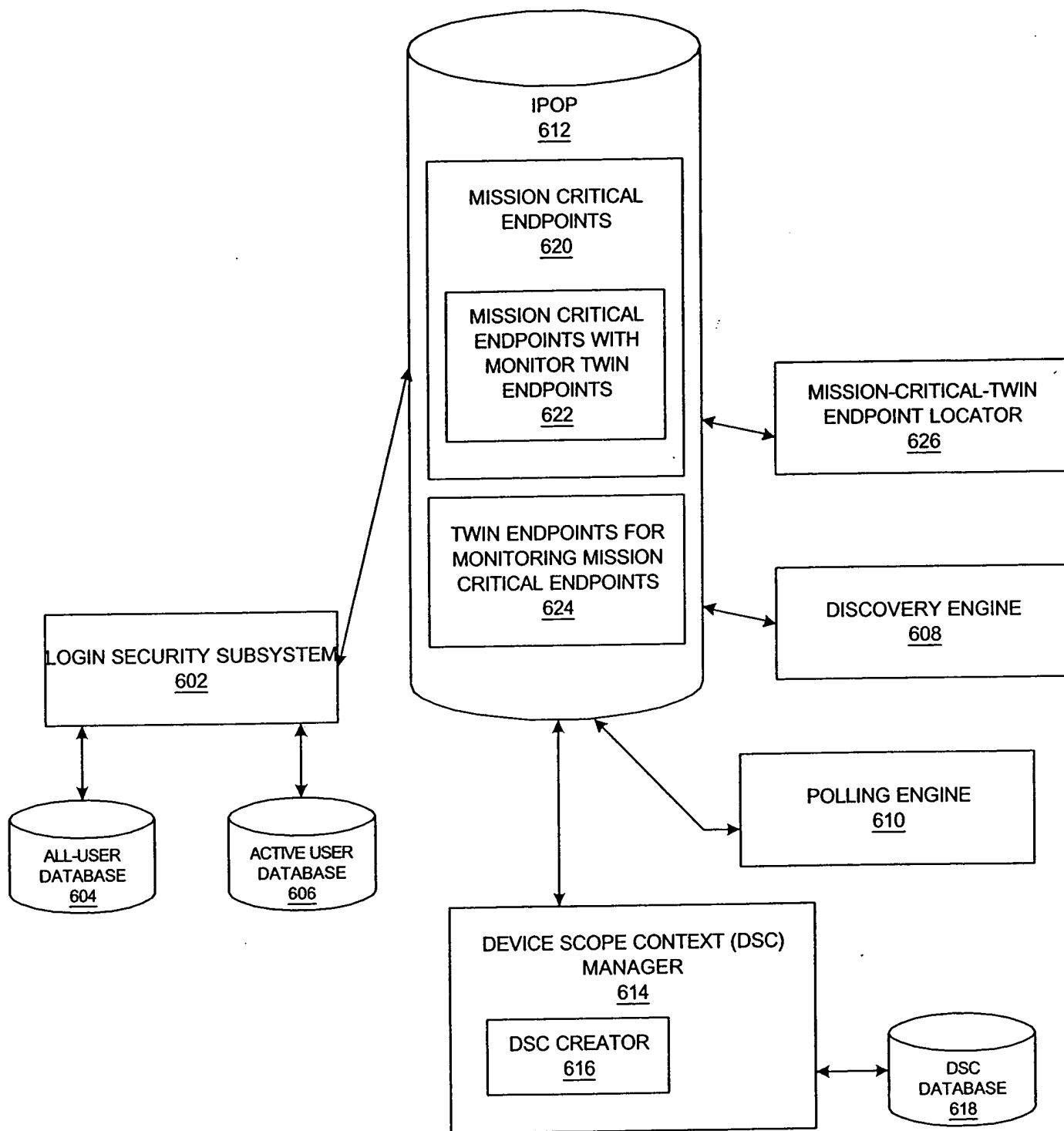


Figure 6

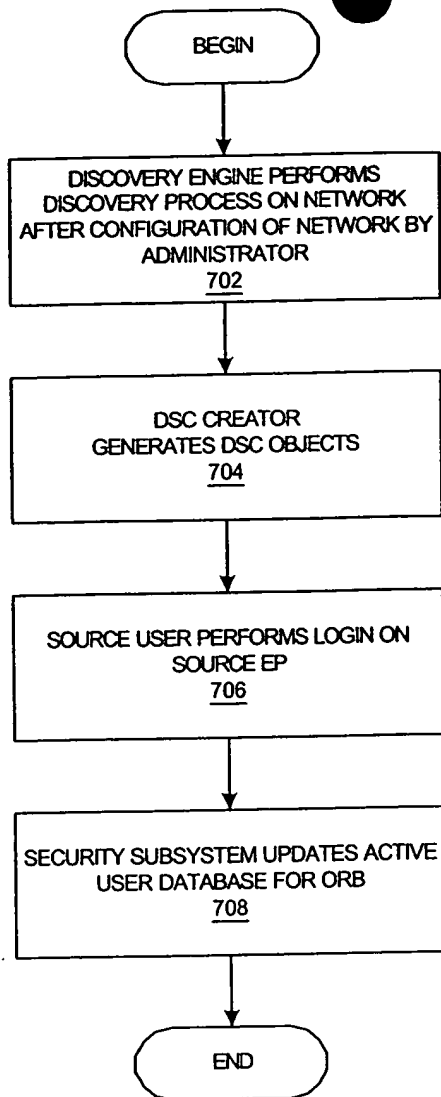


Figure 7A

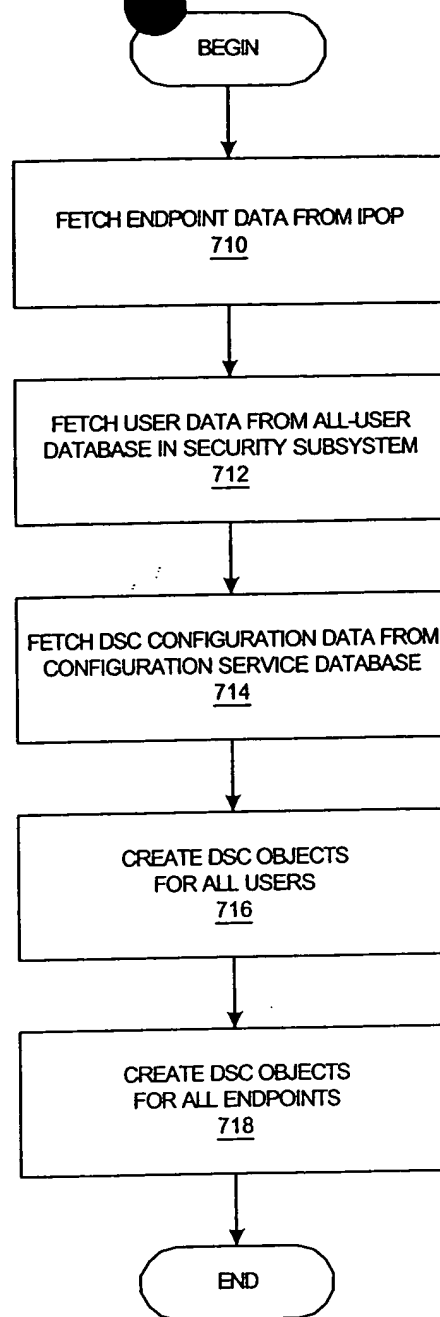


Figure 7B

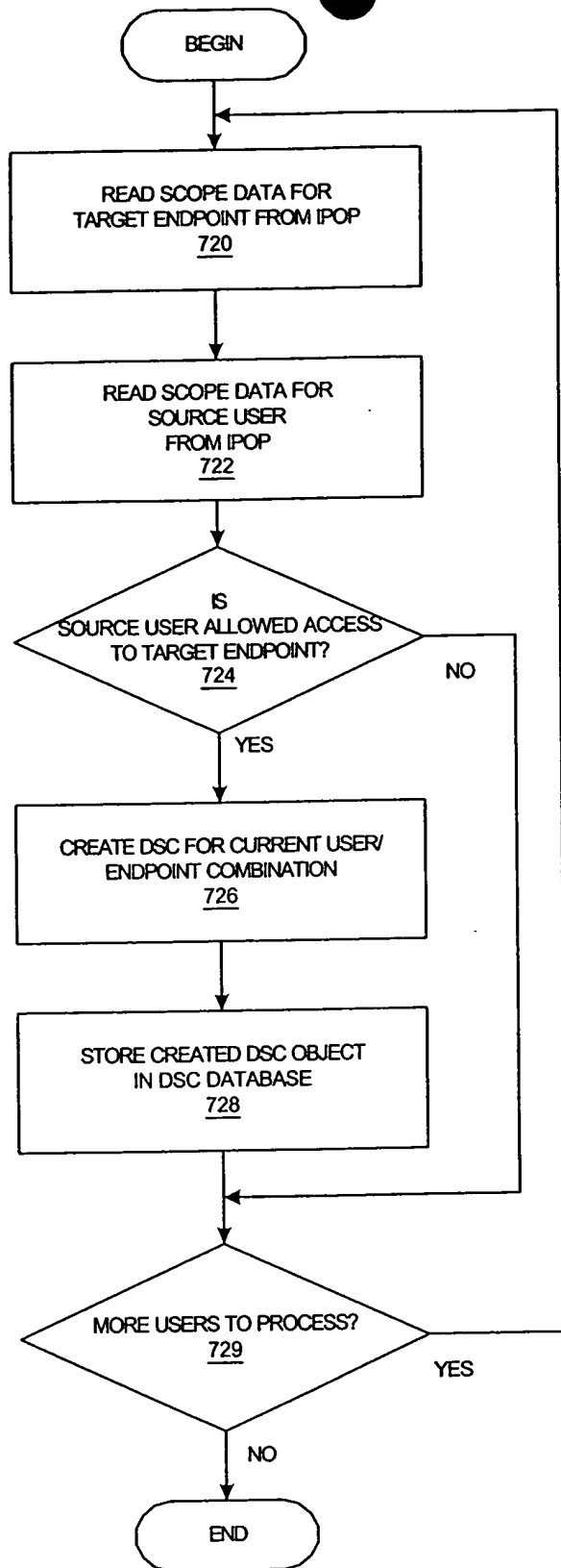


Figure 7C

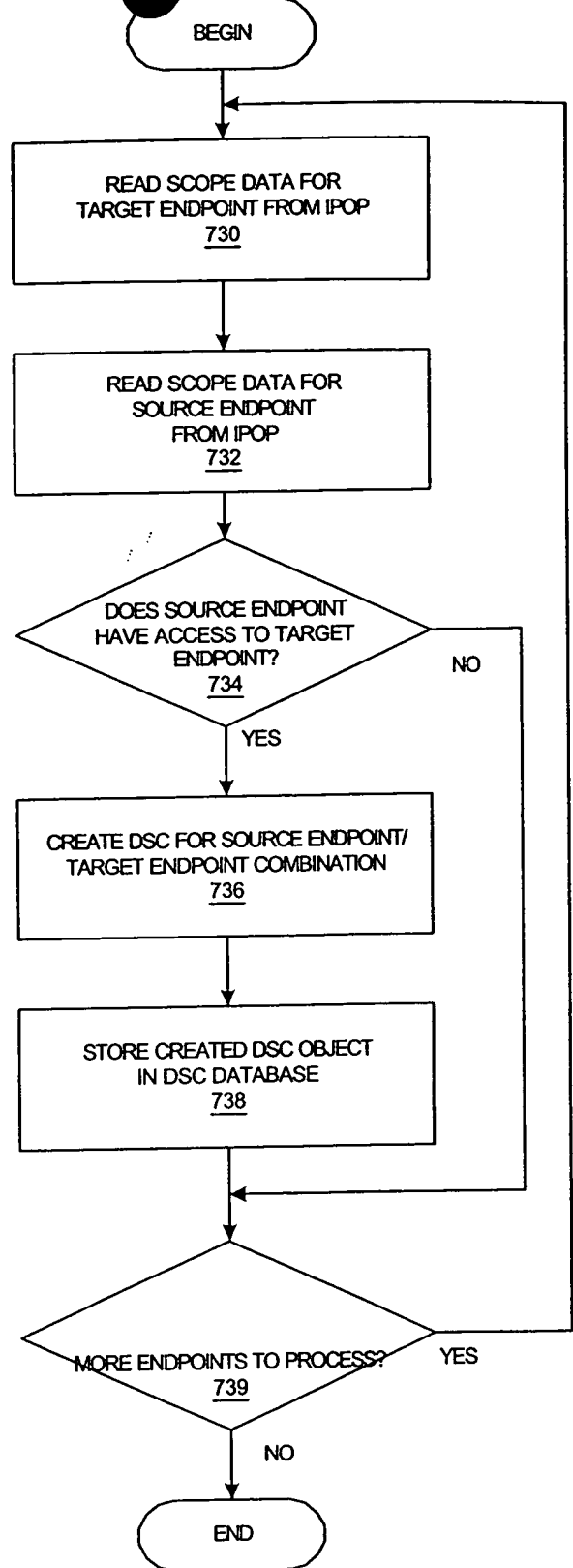


Figure 7D

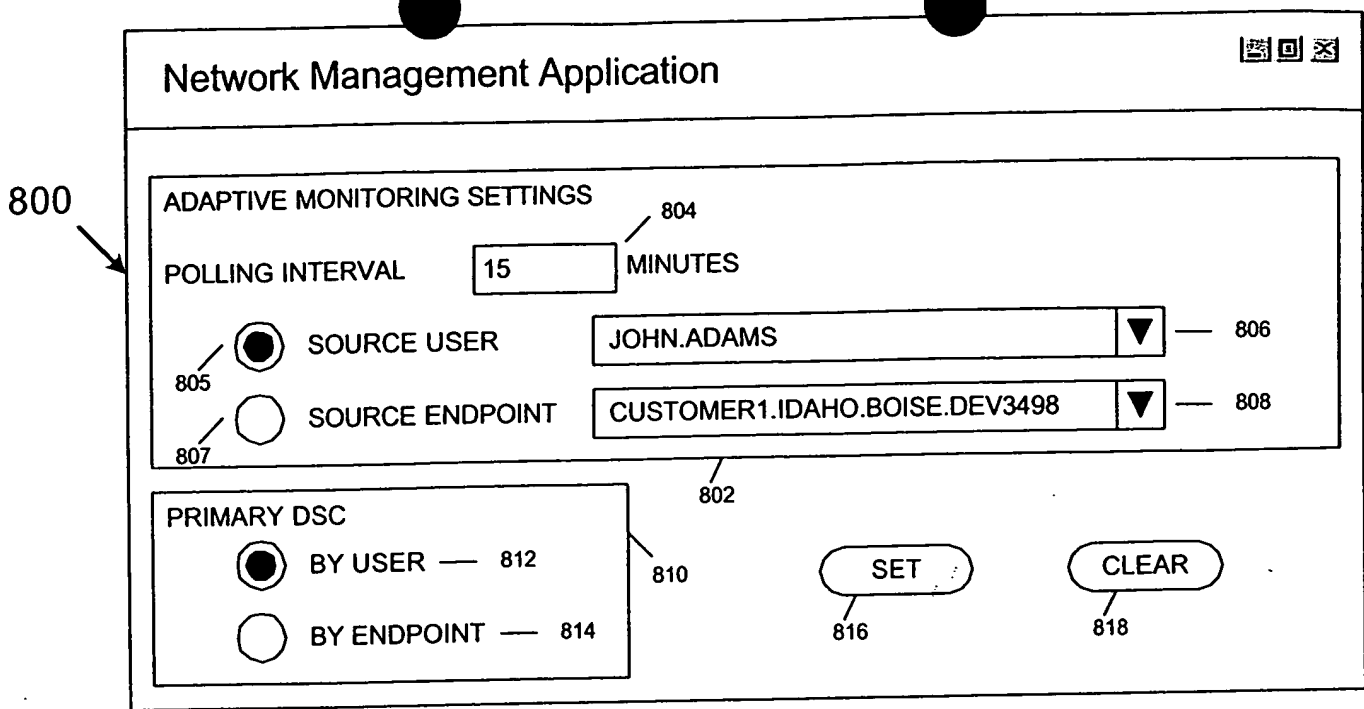


Figure 8A

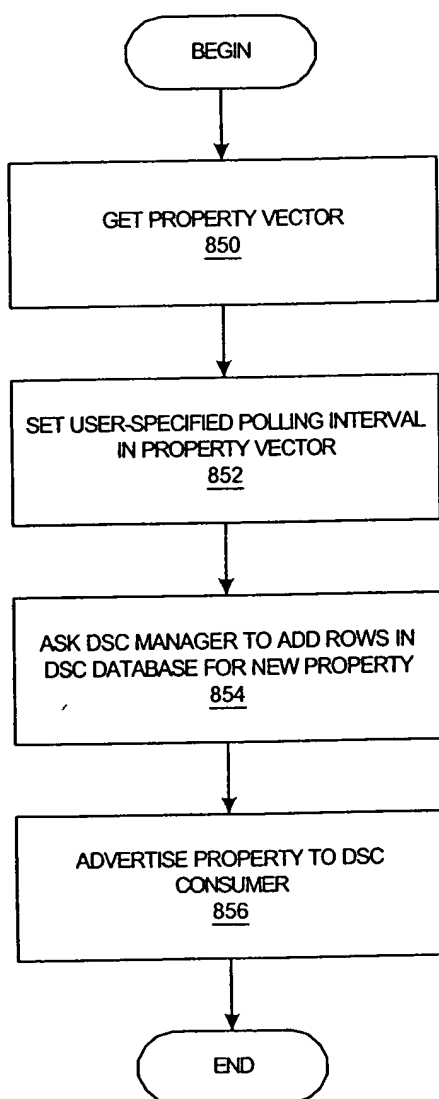


Figure 8C

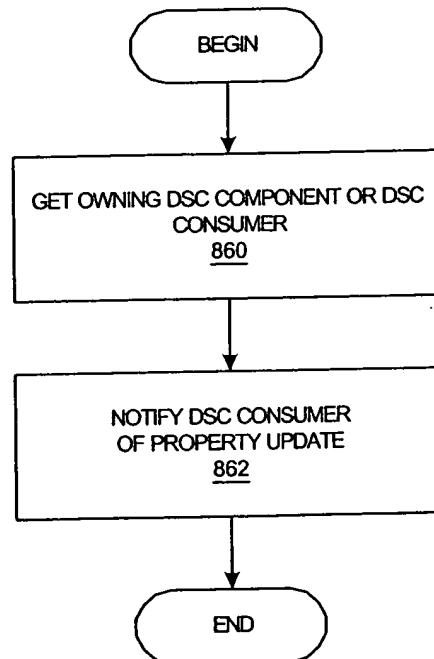


Figure 8D



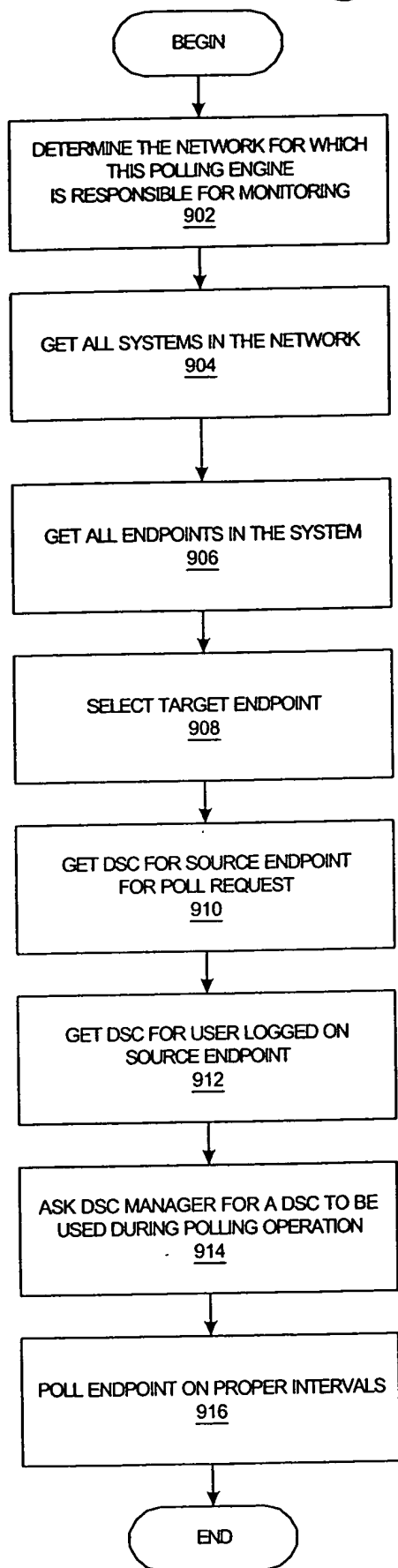


Figure 9A

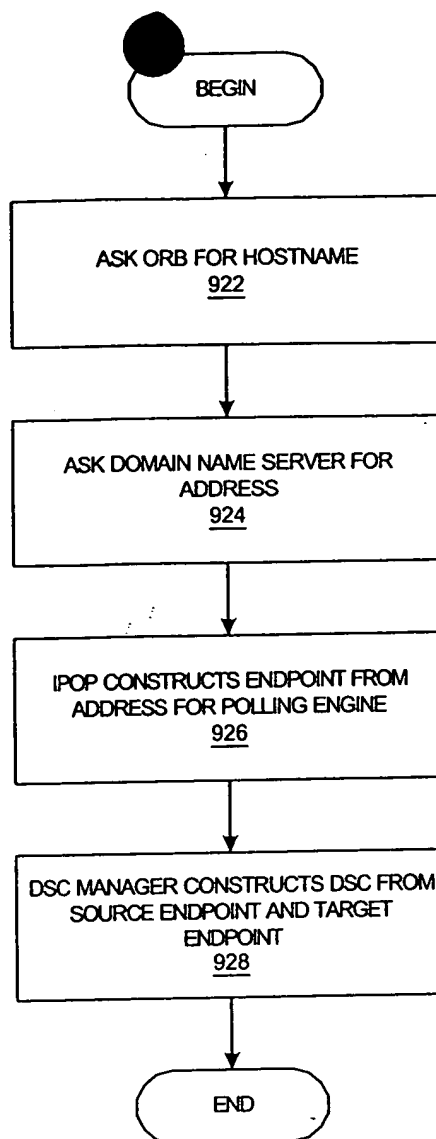


Figure 9B

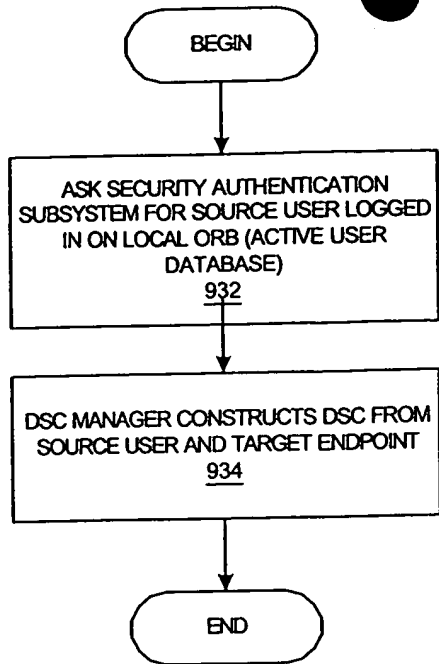


Figure 9C

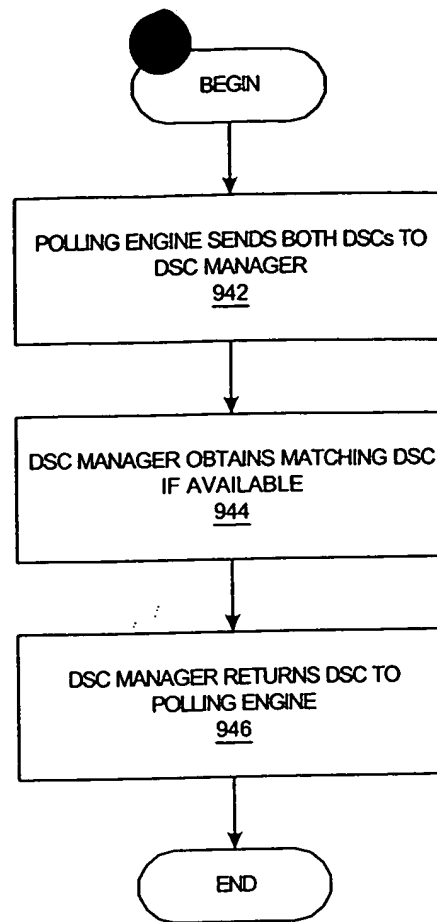


Figure 9D

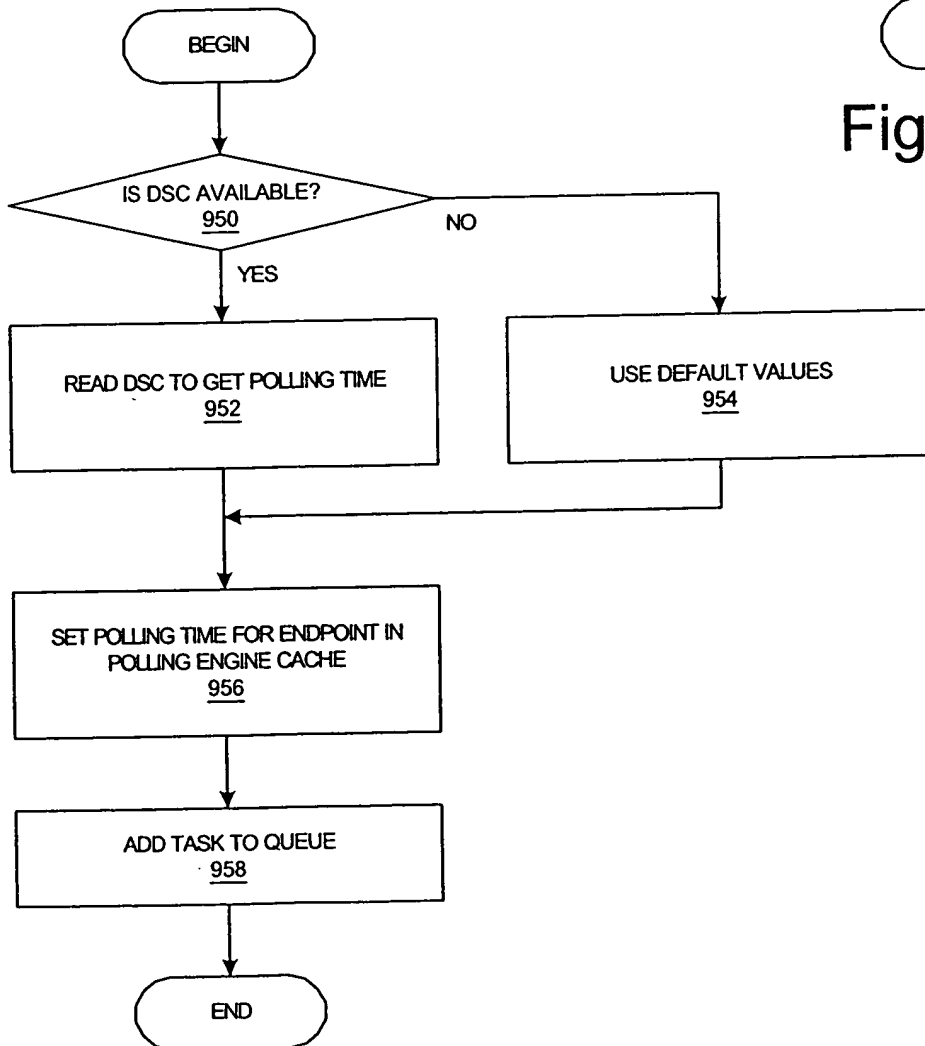


Figure 9E

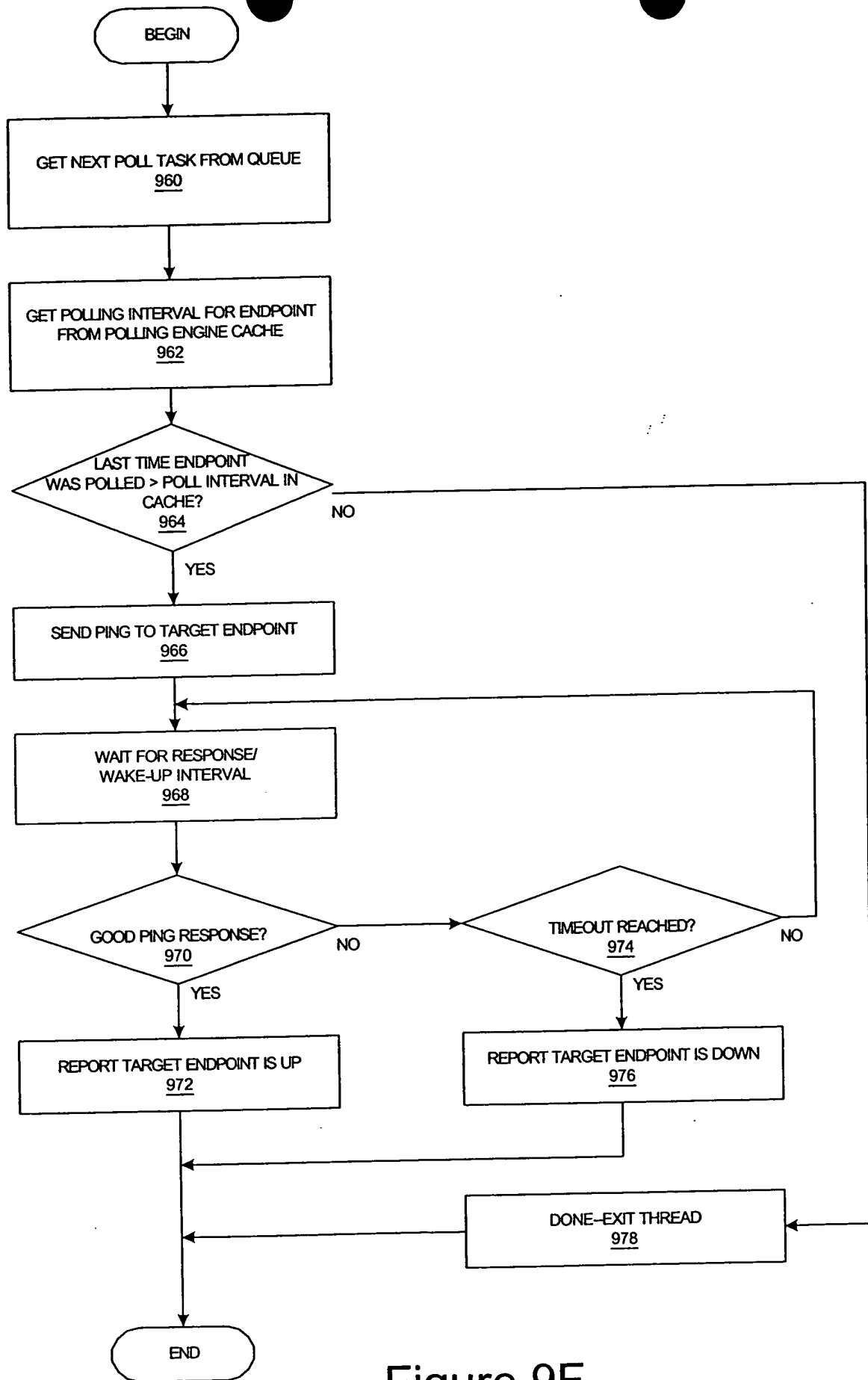


Figure 9F



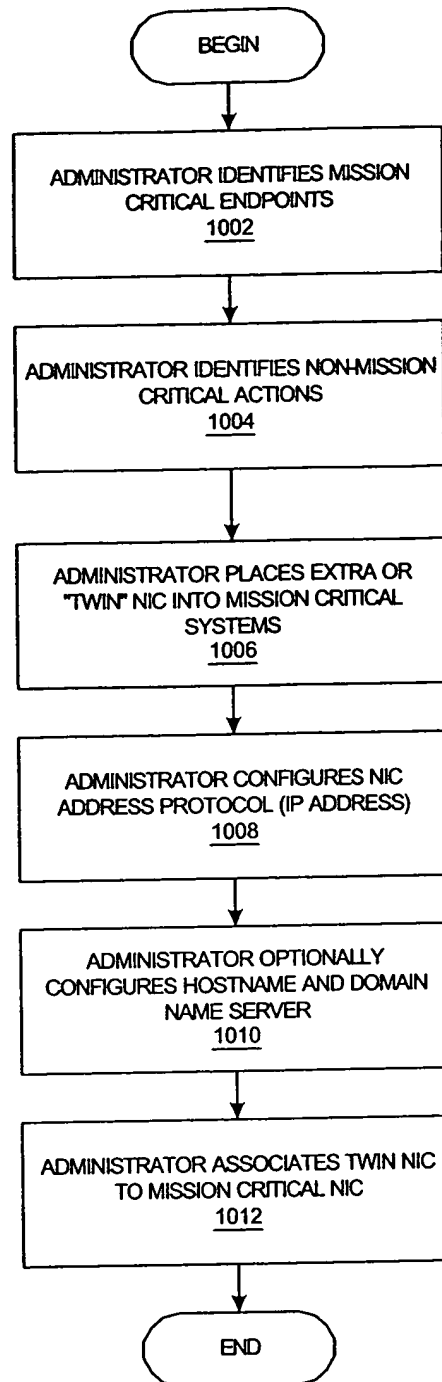


Figure 10A

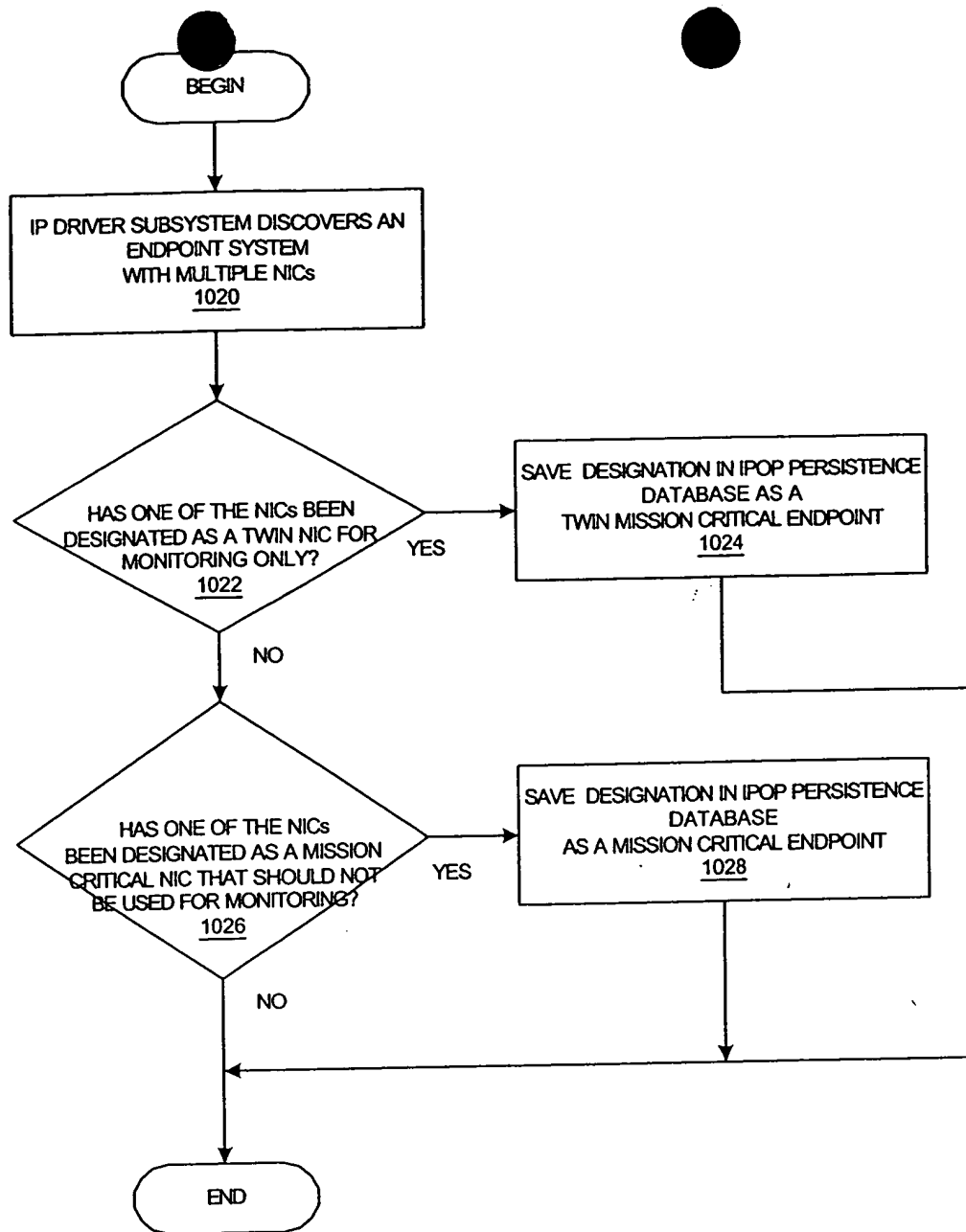


Figure 10B

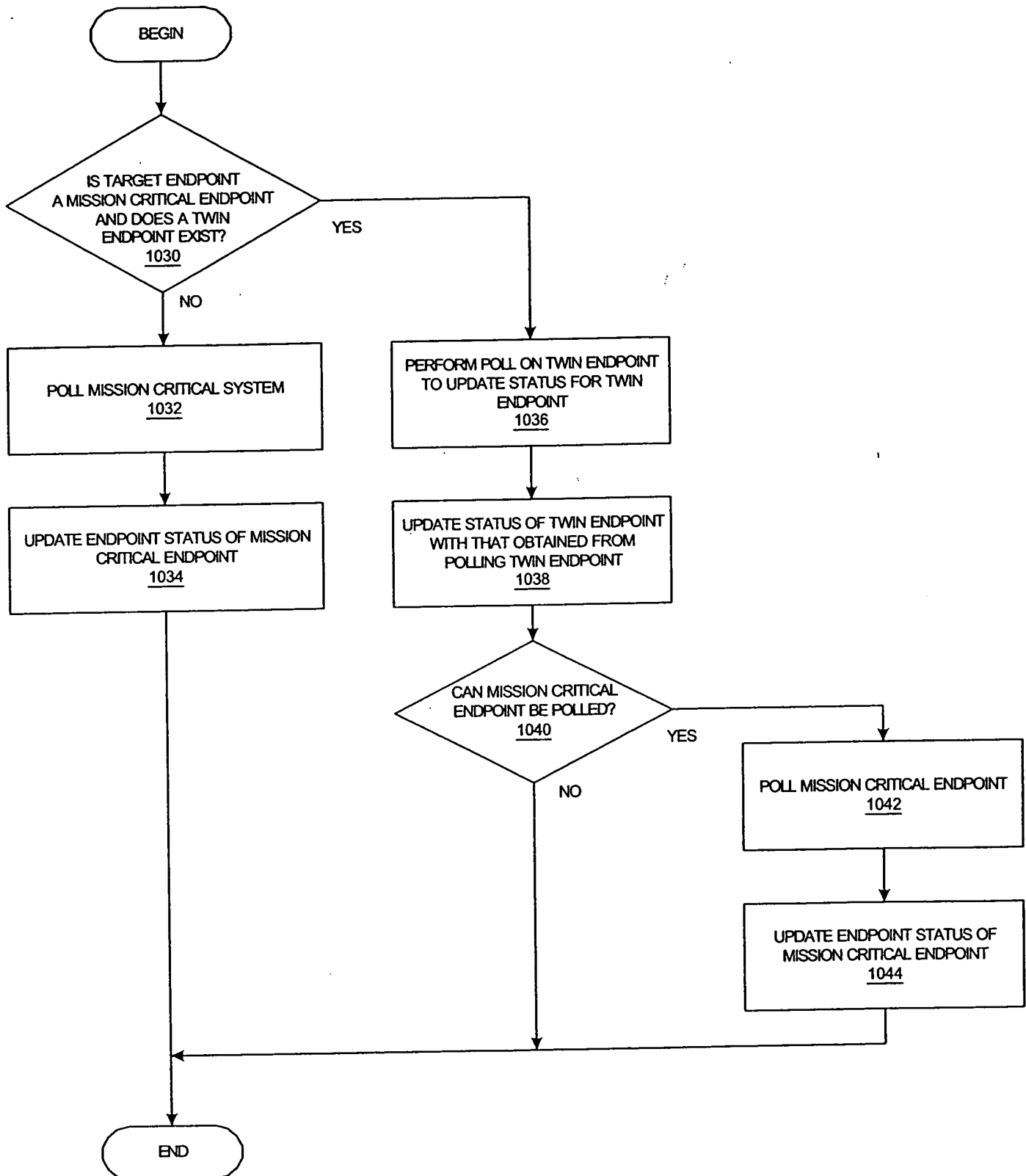


Figure 10C

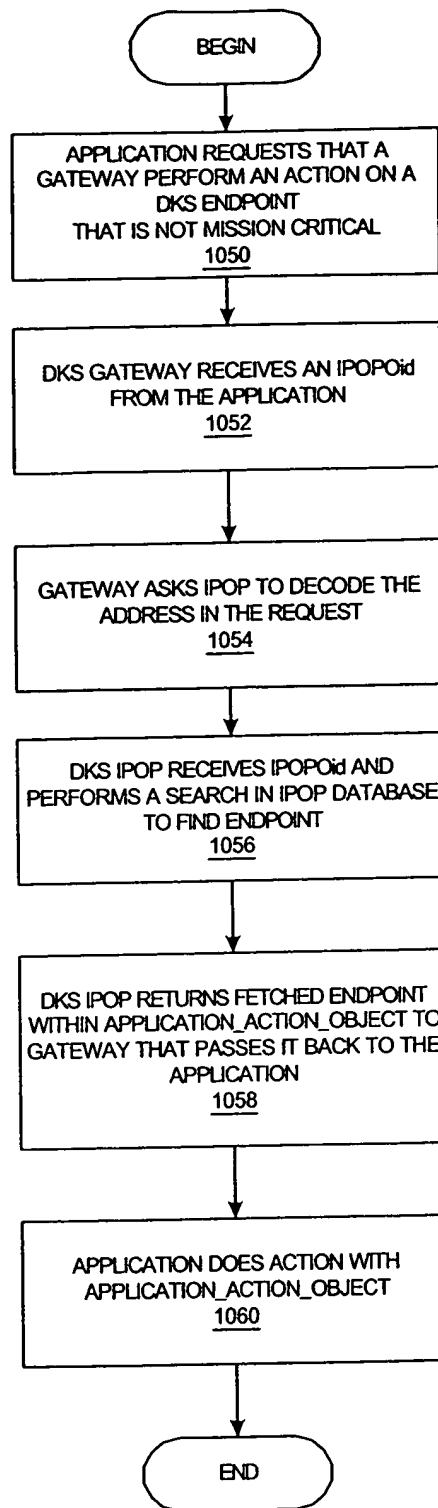


Figure 10D

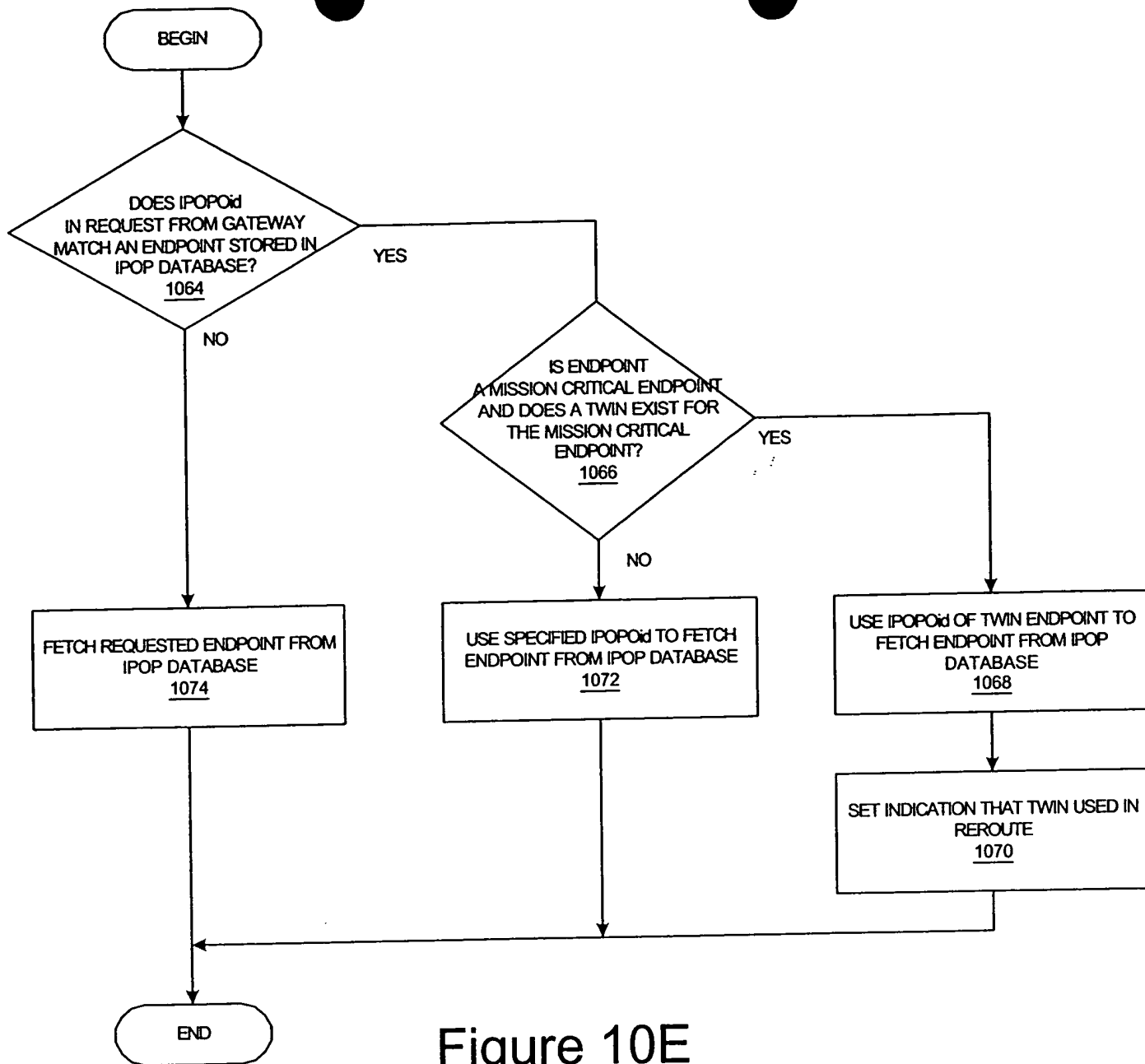


Figure 10E

The screenshot shows a 'Network Management Application' window. At the top, it displays 'MISSION CRITICAL TWIN ASSIGNMENT—MISSION CRITICAL ENDPOINT: 7.17.13.11'. Below this, there is a section titled 'ENDPOINT TO USE AS TWIN:'. This section contains two rows of input fields. The first row has a checkbox (1092) and a text field (1093) for 'MAC ADDRESS:'. The second row has a checked checkbox (1092) and text fields (1094) and (1095) for 'VPN NUMBER:' and 'IP ADDRESS:'. To the right of these fields are two buttons: 'SET' (1096) and 'CLEAR' (1097). The entire interface is labeled with the reference number 1090.

Figure 10F

```

CLASS ACTION_OBJECT {
    // CONSTRUCTOR
    ACTION_OBJECT( LONG IPADDRESS, SHORT VIRTUALPRIVATENETWORKADDRESS )
        THROWS BADADDRESS ...
    .
    .
    .
    VOID PERFORMACTION( ) // EXECUTES ACTION METHOD
    .
    .
    .
}

```

Figure 11A

```

CLASS APPLICATION_ACTION_OBJECT EXTENDS ACTION_OBJECT {
    boolean IsMissionCriticalAction; // TRUE = USED TO PERFORM ENTERPRISE-RELATED WORK
                                     // FALSE = USED TO PERFORM MONITORING OPERATIONS
                                     //      OR OTHER NON-REVENUE PRODUCING ACTION

    boolean TwinUsedinReroute // TRUE = IPOP HAS REPLACED REQUESTED ADDRESS WITH
                              //      AN ADDRESS THAT CAN BE USED FOR
                              //      NON-MISSION CRITICAL ACTION
    .
    .
    .
}

```

Figure 11B

Public Class Endpoint {

//public variables

long

InetAddress

long

EPObjectID; //ID to object (both private and public network addresses)

EPIPAddress; //physical network address (private or public)

EPVPN; //virtual private network ID

//get/set of variables

public long

public InetAddress

public long

getObjectID( ) { ... }

getPAddress( ) { ... }

getVPN( ) { ... }

}

Figure 11C

Class TwinMissionCriticalEndpoint extends Endpoint {

.

.

.

IPOPOid

IPOPOid

missionCriticalEndpoint; // Mission critical endpoint that is used to gather status

missionCriticalSystem; // Mission critical system

long

long

endpointStatus;

twinEndpointStatus;

.

.

.

}

Figure 11D

Class MissionCriticalEndpoint extends Endpoint {

.

.

.

boolean

useForMonitoring;

// TRUE = endpoint can be used for monitoring, polling,  
// and other system-management-type resources

.

.

.

}

Figure 11E

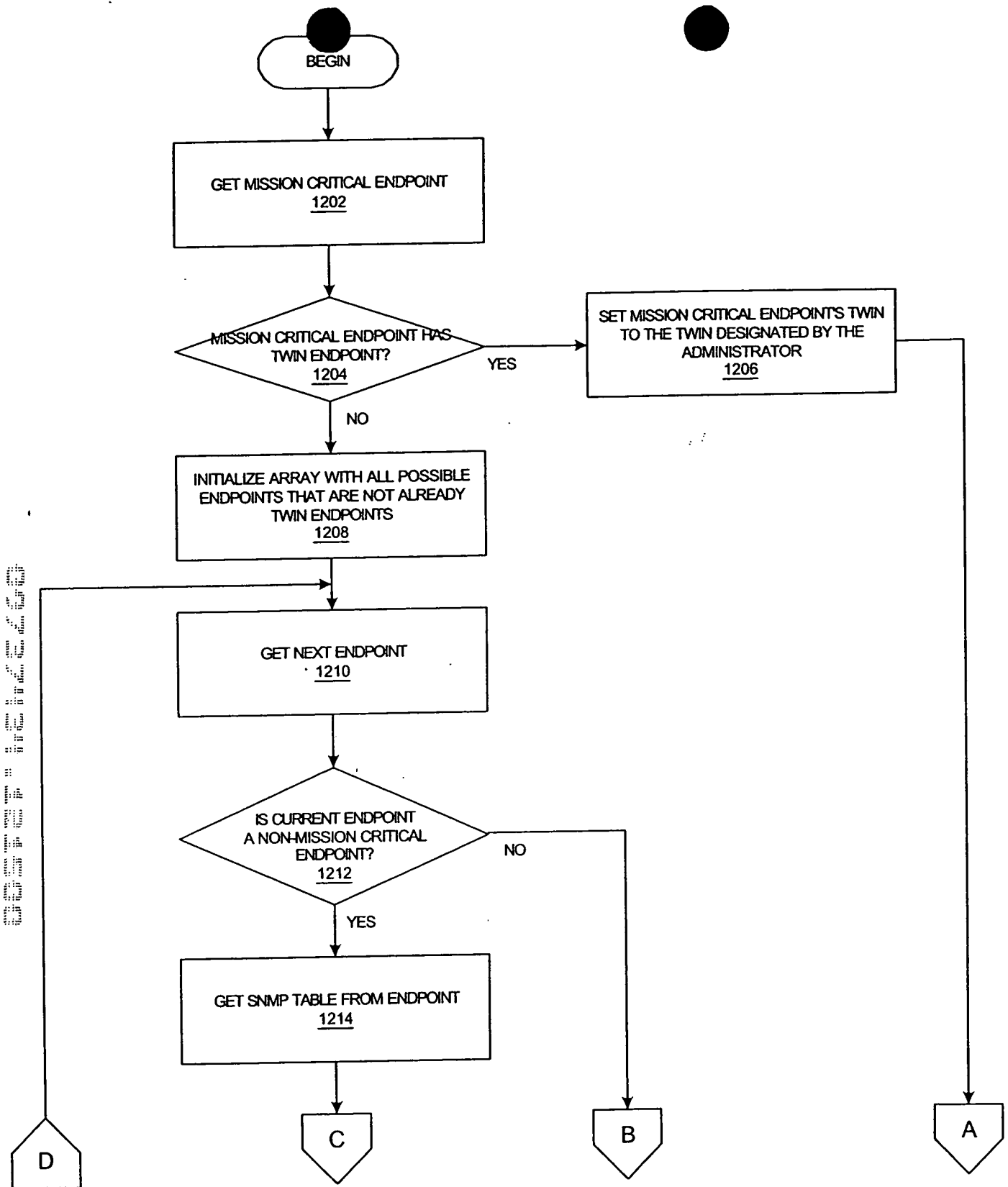


Figure 12A



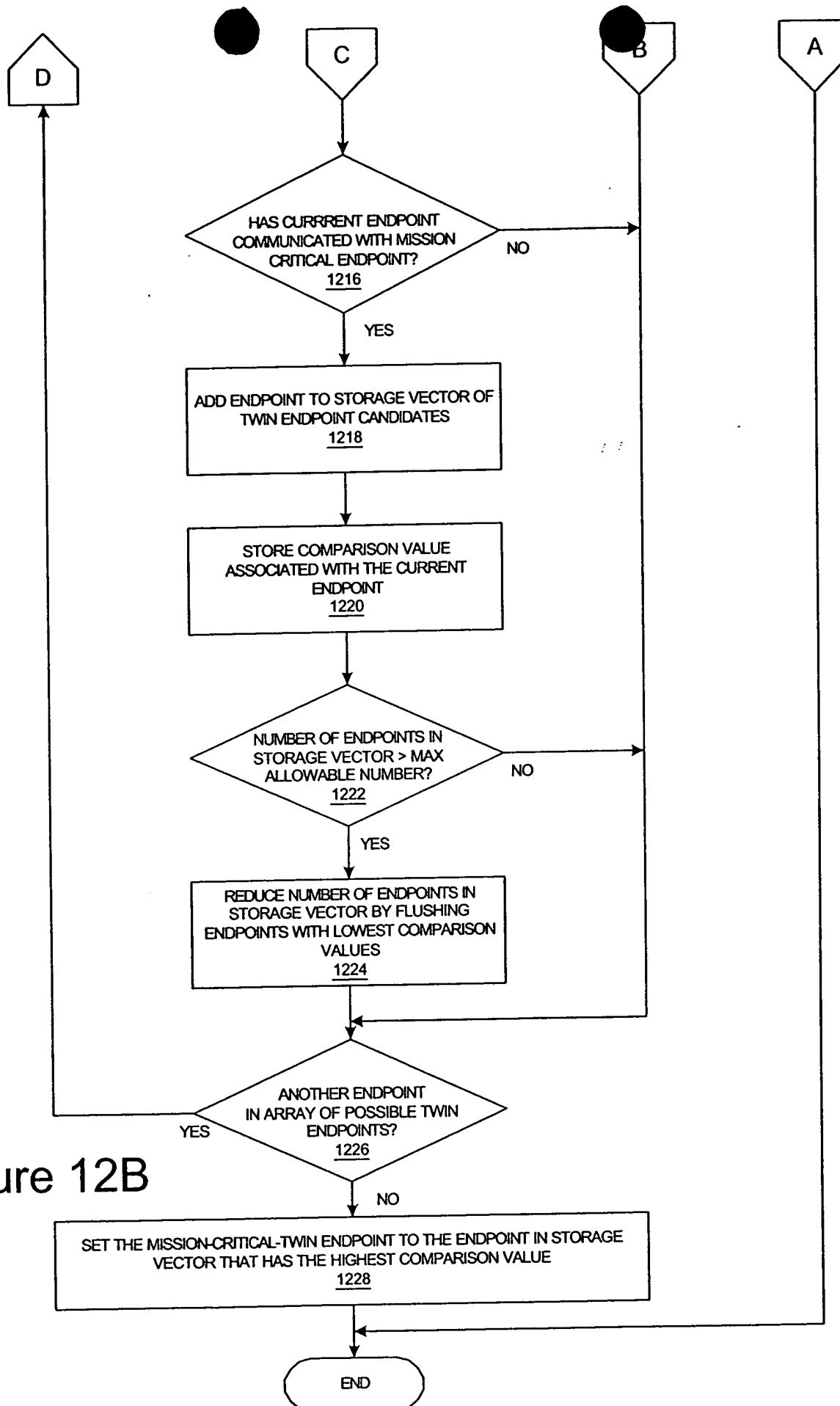


Figure 12B